

# Riverside Women's Health

## Outpatient Cervical Ripening To Reduce LOS & NTSV Rate

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### Problem Statement

A Perinatal Collaborative involving major stakeholders in the Women's Health service line of a large teaching hospital was created to evaluate the rising nulliparous, term, singleton, vertex (NTSV) rate which, for the first time in years, was above national comparison data. This team identified several possible areas for improvement including how inductions of labor (IOL) were scheduled and performed. The team included nurses, midwives, physicians, quality officers, and other ancillary staff.

Additionally, we were very interested in reducing the length of stay (LOS) for patients on this very busy labor unit because inductions were often prolonged due to insufficient cervical ripening at the time of admission. Clinically, we wondered if the use of outpatient (OP) cervical ripening with a Foley Bulb (FB), which was well established in the literature, could be used to decrease the LOS in Labor & Delivery by having cervical ripening done prior to admission. As stated earlier, we also hoped that this OP intervention would reduce our NTSV rate.

### Evidence and PICOT Question

#### Evidence

Multiple studies have demonstrated safety of outpatient cervical ripening. One RCT in 2022 conducted by Saad to compare cervical ripening methods did not find a significant difference in maternal or neonatal outcomes or rates of cesarean delivery when outpatient single bulb mechanical dilatation was performed as compared to inpatient cervical ripening. This study did report an 8 hour decrease in the amount of time that patients were on the labor unit for induction compared to other methods. Another study in January of 2022 also demonstrated a reduction of time on the labor unit by 7.24 hours without increasing adverse outcomes.

#### PICOT

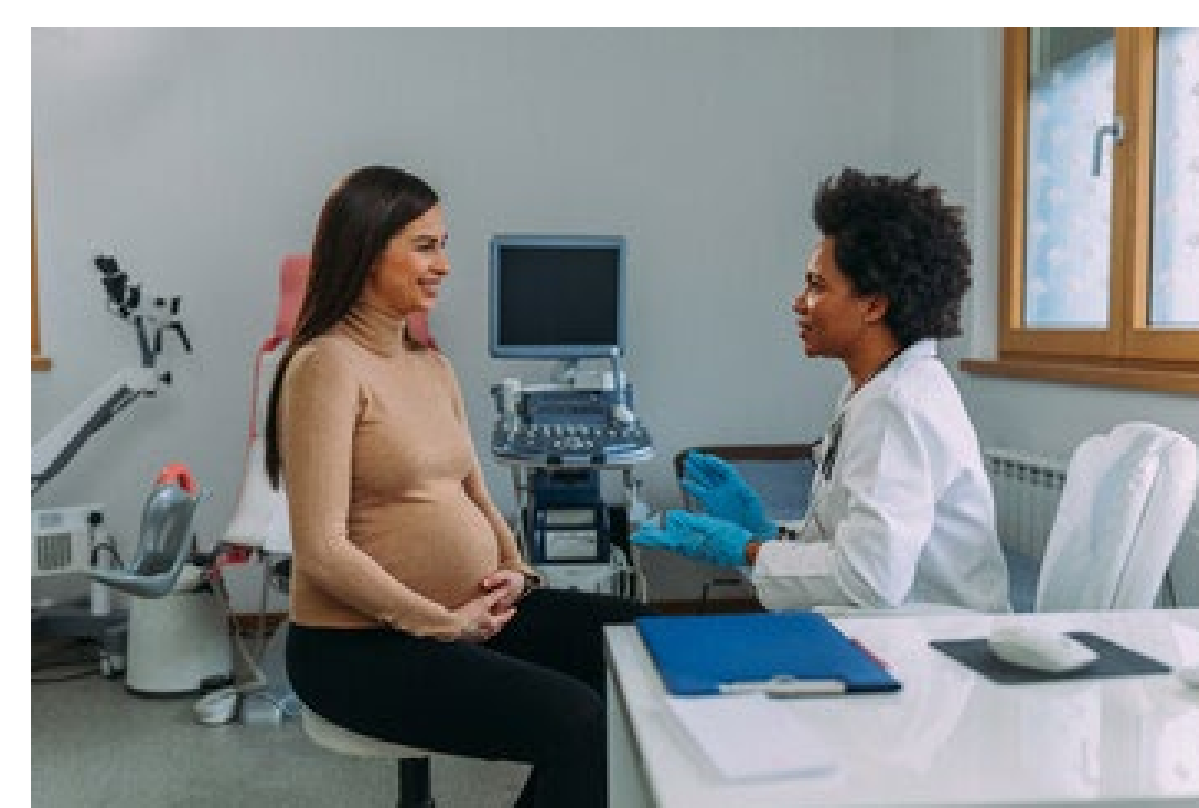
How will outpatient Foley bulb insertion for cervical ripening in women with a term pregnancy and a Bishop Score  $\geq$  or  $<$  6 effect LOS on the labor unit compared to inpatient double lumen bulb cervical ripening?

### Plan

- Identify and meet with stakeholders
- Choose team members
- Educated all stakeholders about the initiative
- Complete a timeline from Kick Off to end
- Write a step by step plan of the practice change
- Gain necessary approval
- Write and revise protocols and procedures for the office setting
- Train nursing support staff to assist in FB insertions
- Provided timely updates to stakeholders
- Collect pre-intervention data
- Choose a Go Live date
- Provide incentive for providers that were early adopters' of the practice change
- Kick off initiative
- Collect post intervention data
- Report results to stakeholders
- Planned for dissemination by poster at APP conference
- Meet to develop plan for sustainability of the practice change

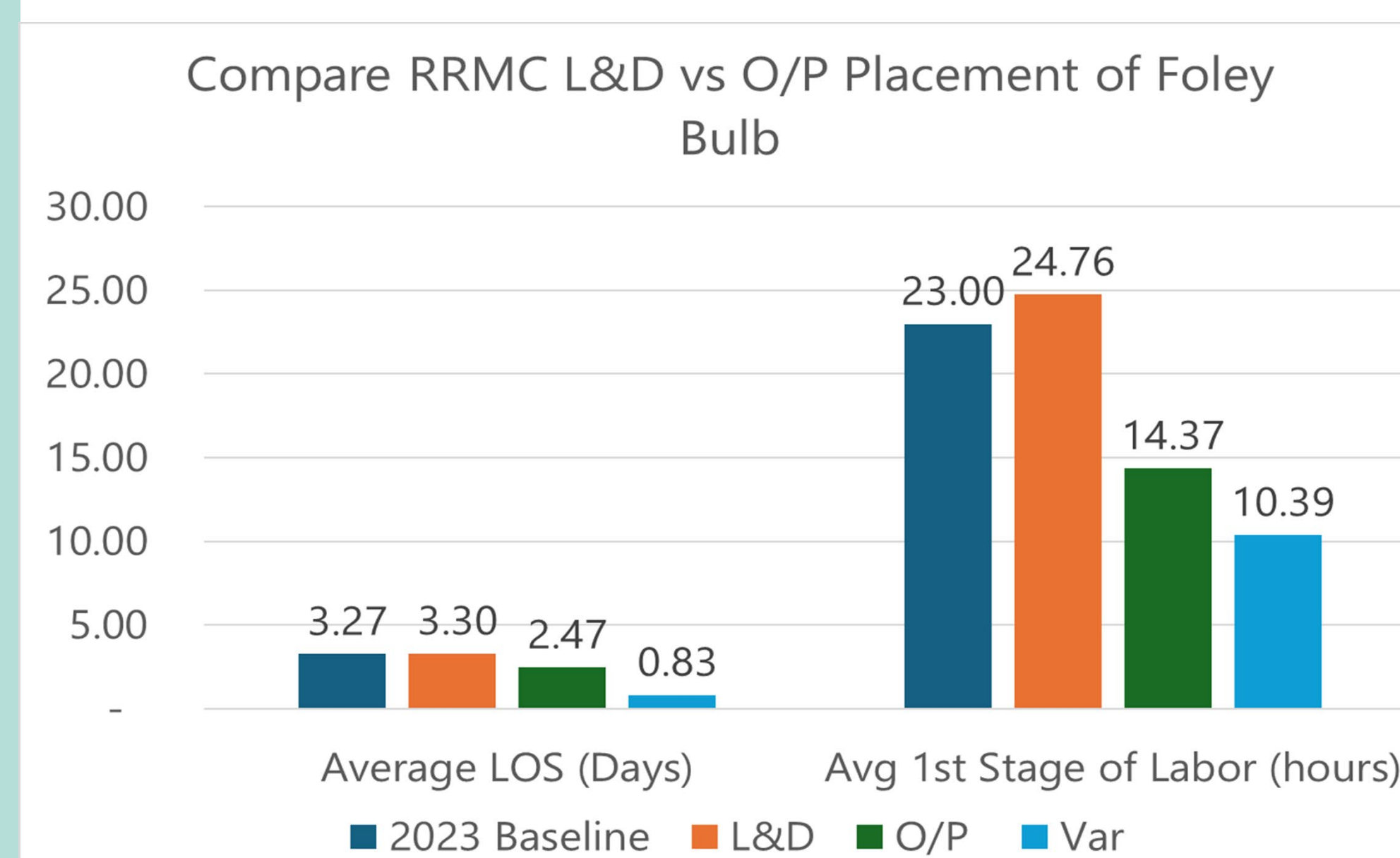
### Pre-intervention Data

Pre-intervention data were collected to measure length of time in labor and delivery for scheduled inductions of labor when maternal cervix was unfavorable with a Bishop Score equal to or  $<$  6. These patients were then offered a Foley Bulb insertion in the outpatient setting for cervical ripening prior to their scheduled IOL.



### Post-Intervention Data

Results were measured in both LOS on the labor unit and total hours for first stage of labor from time of admission. We also measured NTSV rates.



### Conclusions

Use of outpatient Foley bulb insertions for cervical ripening had favorable outcomes without negative impact on patients or staff.

1. We had an almost full day decrease in LOS in Labor and Delivery
2. We saw a reduction in the first stage of labor by over 10 hours
3. Due to our small sample size we did not reach statistical significance but noticed a slight decrease in our NTSV rate when compared to those admitted without FB for cervical ripening

### Lessons Learned

- Because we are a large hospital system, there were more policies and procedures, patient education, and office nurse training that needed to be approved which took additional time. Involving hospital leadership as well as leadership in the clinics would have helped reduce the time it took to start the initiative.
- We found that the type of Foley Bulb tip mattered. Some types were firmer and easier to insert.
- Because non-stress testing was done before and after insertion it caused some scheduling difficulties.
- Providing success rates with the FB cervical ripening data early and often was helpful in getting our providers to consider adopting this practice change

### Implications (Next Steps)

Because of the results of this EBP initiative our service line decided to offer outpatient Foley Bulb insertion for cervical ripening to all patients in the future who are eligible.

#### Sustainability Plan:

- Train all APPs (midwives and nurse practitioners) in the office setting who were interested in learning this new skill to be able to do so
- Continue to encourage providers to offer this method of cervical ripening to our patients during our regular staff meetings by sharing outcome data as gathered
- Assure that the ability to perform this skill is validated in all new providers to the Women's Health service line



### References

- HospiMedica International. (2022, January 26). *Outpatient cervical ripening safely shortens inpatient labor*. Hospimedica.com. <https://www.hospimedica.com/patient-care/articles/294791374/outpatient-cervical-ripening-safely-shortens-inpatient-labor.html>
- Saad, A. F., Gavara, R., Senguttuvan, R.N., Goncharov, A. D., Berry, M., Eid, J., Goldman, B., Nutter, A., Moutos, C.P., Wang, A.M., & Saade, G.R. (2022, October 1). *Outpatient compared with inpatient preinduction cervical ripening using a synthetic osmotic dilator: A randomized clinical trial*. Obstetrics and gynecology. [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9484761/#:text=A%20recent%20Left%20meta%20analysis%2C%20which,%25%20CI%200.59-0.98\). IV](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9484761/#:text=A%20recent%20Left%20meta%20analysis%2C%20which,%25%20CI%200.59-0.98).)

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